

1 What is claimed is:

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4 1. A distributed computing environment, comprising:

5
6 a collection station of one or more collection stations of the distributed
7 computing environment that is responsible for status polling a plurality of
8 objects; and

9
10 a central control unit that automatically performs status polling of the
11 plurality of objects when the collection station becomes temporarily
12 inaccessible on the distributed computing environment and that releases
13 polling of the plurality of objects back to the collection station if the collection
14 station becomes accessible,

15
16 wherein when the collection station and a second collection station of
17 the one or more collection stations are both responsible for polling the plurality
18 of objects, the plurality of objects are polled by both the central control unit and
19 the second collection station while said collection station is inaccessible.

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21 2. The environment of claim 1, wherein the central control unit is a
22 management station.
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1 3. The environment of claim 1, wherein a network monitor program of the
2 central control unit that monitors the one or more collections stations of the
3 distributed computing environment performs status polling of the plurality of
4 objects while said collection station is inaccessible.

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6 4. The environment of claim 3, wherein when the collection station
7 becomes inaccessible, the network monitor program receives a topology of the
8 collection station, wherein the topology of the collection station is a list of the
9 plurality of objects managed by the collection station and nodes and routings
10 thereof.

11
12 5. The environment of claim 4, wherein the list of the plurality of objects is
13 determined by a filter.

14
15 6. A method of automatic status polling failover of objects in a distributed
16 computing environment, comprising:

17
18 a) defining an initial configuration of a central control unit and one or
19 more collection stations of the distributed computing environment in which a
20 user of the distributed computing environment specifies a polling configuration
21 of the central control unit and the one or more collection stations;
22

1 b) determining whether a collection station of one or more collection
2 stations is inaccessible;

3
4 c) if the collection station is inaccessible, loading a topology of the
5 collection station to a network monitor program of a central control unit that
6 monitors the one or more collection stations, wherein the topology is a list of a
7 plurality of objects managed by the collection station and nodes and routings
8 thereof;

9
10 d) automatically performing status polling of a plurality of objects of the
11 topology of the collection station by the central control unit while said collection
12 station is inaccessible; and

13
14 e) monitoring the collection station and releasing the topology of the
15 plurality of objects back to the collection station when the collection station is
16 again accessible so that the collection station can resume status polling of the
17 plurality of objects by the collection station.

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19 7. The method of claim 6, wherein prior to determining whether the
20 collection station is inaccessible, further comprising:

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22 determining the list of the plurality of objects.
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1 8. The method of claim 7, wherein determining the list of the plurality of
2 objects is performed by a filter.

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4 9. The method of claim 6, wherein determining whether the collection
5 station of one or more collection stations is inaccessible comprises:

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7 determining that the central control unit has received a collection station
8 fail event that indicates that the collection station is inaccessible; and

9
10 determining that the collection station fail event is in the topology of the
11 collection station;

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13 10. The method of claim 9, wherein the collection station fail event is
14 received by the central control unit after the collection station has failed to
15 respond to a predetermined number of polls sent by a topology manager
16 program of a topology database to the collection station.

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18 11. The method of claim 6, wherein loading the topology of the collection
19 station comprises:

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21 the network monitor program requesting a list of the plurality of objects
22 managed by the collection station;

1 determining whether the user has specified a filter through which the list
2 of the plurality of objects are to be filtered;

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4 if the user has not specified the filter, calculating the plurality of routes of
5 the plurality of objects and then providing the list of the plurality of objects and
6 the routes of the plurality of objects to the network monitor program; and

7
8 if the user has specified the filter, filtering the list of the plurality of
9 objects to produce a filtered list of the plurality of objects, calculating the
10 plurality of routes of the filtered list and then providing the filtered list of the
11 plurality of objects and the routes of the objects to the network monitor
12 program.

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14 12. The method of claim 11, wherein the topology is provided to the network
15 monitor program from an application programming interface (API).

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17 13. The method of claim 6, further comprising:

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19 determining whether a second collection station of the one or more
20 collection stations is responsible for polling the plurality of objects; and
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1 if the second collection station is responsible for polling the plurality of
2 objects, performing status polling of the plurality of objects by both the central
3 control unit and the second collection station.
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5 14. The method of claim 6, wherein releasing the topology of the plurality of
6 objects back to the collection station occurs after the monitor network program
7 receives a collection station normal event that indicates that the collection
8 station is accessible on the distributed computing environment.
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10 15. The method of claim 6, further comprising:
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12 f) unloading the topology of the collection station from the central control
13 unit; and
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15 g) sending a status message to the user to indicate that the central
16 control unit is no longer status polling the plurality of objects of the collection
17 station.
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19 16. A method of status polling failover of objects in a distributed computing
20 environment, comprising:
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22 a) defining an initial configuration of a central control unit and one or
23 more collection stations of the distributed computing environment in which a

1 user of the distributed computing environment specifies a polling configuration
2 of the central control unit and the one or more collection stations;

3
4 b) receiving a manual failover event initiated by a user;

5
6 c) loading a topology of the collection station to a network monitor
7 program of a central control unit that monitors the one or more collection
8 stations, wherein the topology is a list of a plurality of objects managed by the
9 collection station and nodes and routings thereof; and

10
11 d) performing status polling of a plurality of objects of the topology of the
12 collection station by the central control unit in accordance with the manual
13 failover event.

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15 17. The method of claim 16, wherein loading the topology of the collection
16 station comprises:

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18 the network monitor program requesting a list of the plurality of objects
19 managed by the collection station;

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21 determining whether the user has specified a filter through which the list
22 of the plurality of objects are to be filtered;

1 if the user has not specified the filter, calculating the plurality of routes of
2 the plurality of objects and then providing the list of the plurality of objects and
3 the routes of the plurality of objects to the network monitor program; and
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5 if the user has specified the filter, filtering the list of the plurality of
6 objects to produce a filtered list of the plurality of objects, calculating the
7 plurality of routes of the filtered list and then providing the filtered list of the
8 plurality of objects and the routes of the objects to the network monitor
9 program.

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11 18. The method of claim 17, wherein the topology is provided to the network
12 monitor program from an application programming interface (API).
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14 19. The method of claim 16, further comprising:
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16 e) receiving a manual release event initiated by the user; and
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18 f) ceasing status polling of the plurality of objects by the central control
19 unit.
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21 20. The method of claim 19, further comprising:
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1 g) releasing the topology of the plurality of objects from the central
2 control unit.
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